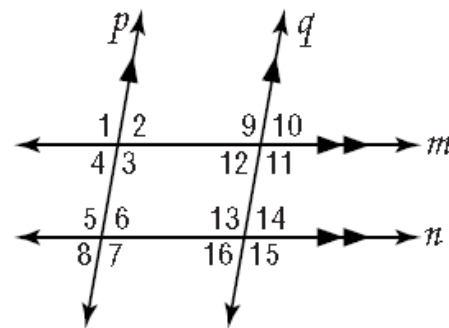


- 23.) Line p is parallel to line q and line m is parallel to n . Explain how $\angle 8 \cong \angle 10$. Please write your answer in complete sentences.



STATEMENT	REASON
1.	1.
2.	2.
3.	3.
4.	4.
5.	5.

Reasons for proofs.

- 1) **Given**- information was given
- 2) **Vertical** \angle 's are \cong - use if you have vertical angles
- 3) **Reflexive**- use if you have something congruent to itself
- 4) **Alternate interior angles (AIA)**- use if you have parallel lines and the angles are AIA.
- 5) **Corresponding Angles (CA)**- use if you have parallel lines and the angles are CA.
- 6) **Alternate exterior angles (AEA)**- use if you have parallel lines and the angles are AEA.
- 7) **Definition of a midpoint**- a midpoint divides a segment into two congruent segments.
- 8) **Definition of angle bisector**- cuts an angle into 2 congruent angles
- 9) **definition of perpendicular**- forms right angles
- 10) **right angles are congruent**- use AFTER you have said you have right angles in the proof.
- 11) **Definiton of perpendicular bisector**- forms right angles AND bisects the angle.